# Delta Methylmercury TMDL & Basin Plan Amendment Information Sheet

## Responsible Agency

California Regional Water Quality Control Board, Central Valley Region
11020 Sun Center Drive #200 Rancho Cordova, CA 95670

## Mercury Impairment, TMDL Development and Basin Planning

The Central Valley Water Board identified the Delta as impaired by mercury because Delta fish have elevated levels of methylmercury that pose a risk for human and wildlife consumers. The Central Valley Water Board's development of a water quality attainment strategy to resolve the mercury impairment in the Delta has two components: the methylmercury total maximum daily load (TMDL) for the Delta and the amendment of the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (the Basin Plan) to implement the TMDL program. The proposed Basin Plan amendment and TMDL draft staff reports will be made available for public review and presented – with public comments and staff responses to public comments – to the Central Valley Water Board members for their consideration and adoption. Reports and other notices can be obtained at:
http://www.waterboards.ca.gov/centralvalley/programs/tmdl/deltahg.html.

The TMDL development process involves the technical analysis of methyl and total mercury sources; identification of safe fish tissue methylmercury levels protective of humans and wildlife that consume Delta fish and a correlated implementation goal for methylmercury in ambient water; and calculation of the amount of ambient methylmercury reduction needed to attain the proposed implementation goal. A draft TMDL report was released in August 2005. The updated TMDL report (June 2006) is now available on the website noted above.

The Basin Planning process focuses on the amendment of the Basin Plan to include Delta-specific water quality objectives for mercury in Delta fish and an implementation program to achieve the objectives. The proposed Basin Plan amendment draft staff report will identify a range of alternatives for fish tissue objectives and implementation options. The draft staff report also will include information and analyses required to comply with the California Environmental Quality Act and propose regulations to require the evaluation and control of a variety of methyl and total mercury sources to the Delta.

## Proposed Water Quality Objectives

As described in the forthcoming Basin Plan amendment draft staff report, staff recommends three water quality objectives:

- 0.24 mg/kg (wet weight) in muscle tissue of large (150-500 mm total length or legal catch length if designated by DFG) trophic level (TL) 4 fish such as bass and catfish;
- 0.08 mg/kg (wet weight) in muscle tissue of large TL3 fish such as carp and salmon; and
- 0.03 mg/kg (wet weight) in whole TL2/3 fish less than 50 mm in length, such as inland silverside, mosquitofish and threadfin shad.

The objectives for large TL3 and 4 fish are protective of (a) humans eating 32 g/day (1 meal/week) of commonly consumed, large fish; and (b) all wildlife species (e.g., bald eagle, osprey, and river otter) that consume large fish. The objective for small TL2/3 fish is protective of wildlife species that consume small fish (e.g., California least tern and western snowy plover).

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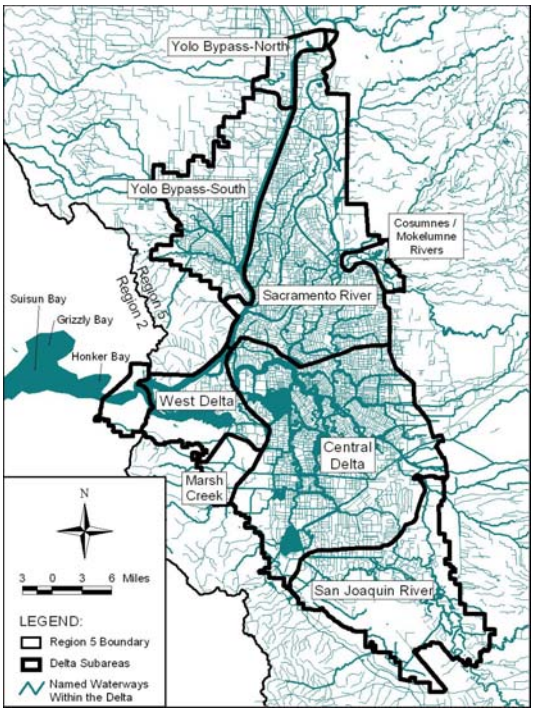
## Proposed Implementation Program

The proposed implementation program focuses on sources of both methylmercury and inorganic mercury. The proposed implementation program focuses on methylmercury because the TMDL analyses and studies conducted elsewhere in California and the United States indicate that reducing methylmercury levels in ambient water should result in the reduction of fish methylmercury levels. The program also addresses inorganic mercury because: methylmercury production has been found to be a function of the inorganic mercury content of sediment; the implementation program for the Delta must maintain compliance with the USEPA's CTR criterion for total recoverable mercury in freshwater sources; and the mercury control program for San Francisco Bay has assigned a total mercury load reduction of 110 kg/yr to the Central Valley. Methylmercury sources include tributary inputs from upstream watersheds and within-Delta sources such as sediment flux from wetlands and open water habitats, municipal and industrial wastewater, agricultural drainage, and urban runoff. Sources of inorganic mercury occur primarily in the Delta's tributary watersheds and include gold and mercury mine sites, legacy mercury in the stream channel sediments, geothermal springs, atmospheric deposition, urban runoff, and municipal and industrial wastewater.

For the first phase of the control program, staff recommends that parties responsible for methylmercury sources in the Delta and within 30 miles upstream of the legal Delta boundary (see figure) be required to conduct individual or collaborative methylmercury source characterization and control studies. In addition, staff recommends inorganic mercury load reductions for the tributary watersheds that export large volumes of highly contaminated sediment (e.g., Cache Creek Settling Basin, Putah Creek, and Feather and American Rivers) and caps for all other inorganic mercury sources (e.g., atmospheric deposition, urban runoff, dredging activities, and municipal and industrial wastewater) in the Delta and downstream of major dams in the tributary watersheds. Additional actions may be identified during the second phase of the control program and implemented through future Basin Plan amendments. The Central Valley Water Board will evaluate several implementation alternatives to ultimately determine the scope of the Delta mercury control program.



Legal Delta Boundary &
Hydrology-Based Delineation of Subareas

## Tentative Time Schedule for Delta TMDL & Basin Plan Amendment

Draft Delta Methylmercury TMDL Report ..... 26 August 2005
CEQA Scoping Meeting ..... 29 September 2005
Central Valley Water Board Workshop ..... 28 November 2005
Proposed Basin Plan Amendment Draft Staff Report ... Summer 2006
Central Valley Water Board Hearing ..... Winter 2006/2007

### Contact Information

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## Email Distribution List

To automatically receive an email notice as new information becomes available, please subscribe to our Email Distribution List at: http://www.waterboards.ca.gov/lyrisforms/reg5_subscribe.html. Simply enter your name and email address and check "Delta Mercury TMDL".

*Updated: 21 June 2006*